Alaska Energy and Engineering, Inc.
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November 9, 2012

Fannie Carroll, General Manager
Gwitchyaa Zhee Corporation
P.O. Box 329
Fort Yukon, AK 95740

via email: gzcorporation@yahoo.com

Re: **Fort Yukon DOE CHP Public Notice**

Dear Ms. Carroll:

Please find enclosed the DOE CHP Scoping Letter and Project Description for the Fort Yukon Rural Power System Upgrade Combined Heat and Power Project. The public notices will become part of the environmental review record which the National Environmental Policy Act (NEPA) requires for "major federal actions significantly affecting the quality of the human environment".

This Public Notice must be postmarked and posted beginning today, November 9, 2012. (The posting period will end Wednesday, November 28). Please make copies of the postmarked Public Notice and post in the Post Office and other public buildings. Also, please fax or email a copy of the Public Notice with the "date posted up" to me for my files at (907) 349-8001 or aeetech@ak.net.

Upon completion of the posting period, have the Postmaster postmark the original Public Notice with the "date posted down" and fax or email a copy to me at (907) 349-8001. Mail the original postmarked up and down Early Public Notice to me at the above mailing address. Please keep a copy for your files.

Fax all written comments received during the posting period to Alan Fetters at AEA at (907) 771-3044.

If you have any questions, please call me at (907) 349-0100, or Alan Fetters at AEA at (907) 771-3063.

Sincerely,

Alison Sterley

Alaska Energy and Engineering, Inc

cc: Bryan Maracle, CATG, bmaracle@catg.org
Alan Fetters, AEA, afetters@aidea.org

Attachment
Fort Yukon Combined Biomass Heating System

The U.S. Department of Energy, U.S. Department of Agriculture Rural Utility Services (RUS), and the Denali Commission are considering authorizing the expenditure of Federal funding to implement a Combined Biomass Heating System in Fort Yukon Alaska.

The funding would be used for the purchase of diesel generators and a high efficiency boiler, the installation of a new Combined Heat and Power (CHP) plant containing a new diesel power plant with heat recovery and a high-efficiency boiler fired by wood chips, a wood chip storage area, harvesting equipment, a shop to protect and work on equipment, and a district heating loop to distribute heat to local users. The proposed Combined Biomass Heating System would replace the existing inefficient power plant in Fort Yukon, and offset about 80 percent of the fuel oil currently used by commercial end-users. To support operation of the wood-fired boiler, approximately 2,000 green tons of woody biomass would be harvested from surrounding private lands owned by the Gwitchyaa Zhee Corporation (GZC) each year. Operation of the proposed Combined Biomass Heating System would help stabilize volatile fuel prices and provide economic development in Fort Yukon through the development of a local wood products industry.

Power Plant

The diesel power plant and wood boiler facilities would be located in Fort Yukon (Figure 1) and would be housed in a new pre-engineered metal building. Because the power plant would be located within a 100-year floodplain, the building and foundation would be elevated on an earthen pad to mitigate flood issues and to comply with federal codes.

The new power plant would contain electronically-controlled, fuel-efficient diesel generators with a total installed capacity of between 1,900 and 2,500 kilowatts. Two of the existing electronically controlled generators currently used in the Gwitchyaa Zhee Utility Company (GZU) power plant would be moved to the new facility and re-used, and two new electronically controlled fuel-efficient generators would be purchased to replace existing antiquated and inefficient equipment. New switchgear would provide automatic paralleling and load control of the four generating units to maximize generation reliability and fuel efficiency. Critical grade silencers and sound insulating dampers would attenuate noise from the plant. The cooling system would be equipped with new radiators and efficient variable-speed motor controls. The plant would be provided with a new fire suppression system, and new engine coolant, fuel, and lube oil piping. A new double-wall fuel tank would be located adjacent to the power plant. The double-wall tank would be truck filled, and equipped with redundant overfill protection devices. The existing community above-grade electric distribution system would be upgraded to tie into the new power plant. A wood-chip-fired boiler rated at 3.2 million British Thermal Units would augment the heat recovery system from the diesel generators and provide heat for the district heating system. The wood boiler would be equipped with chip storage and an automatic chip feed system. Areas for wood processing and feeding, chip storage, and wood storage would be located contiguous to the plant site.

District Heating System

The district heating system would provide heat to public and community buildings in the downtown community core and adjacent areas of Fort Yukon (Figure 1). Below-grade, pre-insulated, arctic piping would be routed from the CHP facility to those buildings. The buildings would be tied into the district heating system via a combination of heat exchangers, fan coil units, and unit heaters. The district heating system would offset as much as 145,000 gallons of diesel heating fuel annually. Work associated with the CHP plant and its distribution system would be performed within existing road and utility rights-of-ways, to the maximum extent possible.

Biomass Harvesting

To operate the wood-fired boiler, approximately 1,600 – 2,000 green tons per year of woody biomass would be harvested from 80 to 100 acres of surrounding private lands owned by the Gwitchyaa Zhee Corporation (GZC) (Figure 2). For the first five years all harvesting would take place within a five-mile radius of Fort Yukon in order to develop the forest management capacity as an adaptive management program. Ultimately, a forty-year biomass rotation is expected and harvesting would occur within a 10-mile radius around the village.

Regeneration efforts would focus on developing faster growing hardwood stands and creating a series of stands of different ages, structural diversity, and species composition across the landscape. A total harvest area of approximately 4,500 acres would occur during the forty-year rotation period. This represents approximately 2 percent of the total acreage of land owned by GZC in the area. After forty years, sufficient woody biomass would be regenerated in the original stands to permit a second harvest.

The harvest and transportation of woody biomass would occur mostly in the winter after freeze-up of the ground and area rivers have occurred, and before break-up in the spring. Designated wetland areas within a stand would not be harvested and any other activities occurring in wetlands would take place during winter when the ground is frozen, to limit soil impact. Some harvest would occur during the summer in select non-wetland areas that are dry enough to support harvest with no adverse impacts to soils or wetlands. A harvest plan has been approved by the local Lands Committee and would be updated annually. All harvesting activities would be in compliance with the Alaska Forest Resources Practices Act with special attention paid to minimizing impacts to riparian areas and wetlands. A total of 4 – 5 harvest and forest management jobs would be created as a direct result of this project.

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

November 7, 2012

To: Distribution List

Subject: Notice of Scoping and Notice of Proposed Floodplain and Wetlands Action for the Fort Yukon Combined Biomass Heating System, Fort Yukon, Alaska (DOE/EA-1922)

The U.S. Department of Energy (DOE), U.S. Department of Agriculture Rural Utility Services (RUS), and the Denali Commission are considering authorizing the expenditure of Federal funding to implement a Combined Biomass Heating System in Fort Yukon, Alaska. The funding would be used for the purchase of diesel generators and a high efficiency boiler, the installation of a new diesel power plant with heat recovery and the high efficiency boiler fired by wood chips, a wood chip storage area, harvesting equipment, a shop to protect and work on equipment and a district heating loop to distribute heat to local users. To support operation of the wood-fired boiler, approximately 1,600 – 2,000 green tons of woody biomass would be harvested from surrounding private lands owned by the Gwitchyaa Zhee Corporation each year. See the attachment for more information about this proposed project.

Pursuant to the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations (40 CFR Parts 1500 to 1508), and DOE and RUS NEPA implementing procedures (10 CFR 1021 and 7 CFR 1794), DOE, in cooperation with RUS and the Denali Commission, is preparing a draft environmental assessment (EA) to:

- Identify any potential adverse effects and associated mitigation measures should this proposed action be implemented;
- Evaluate viable alternatives to the proposed action, including a no action alternative;
- Describe the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity; and
- Characterize any irreversible commitments of resources that may be involved should this proposed action be implemented.

Potential Environmental Effects/Issues Scoped for the EA

The EA will identify, describe, and determine potential impacts, if any, on the environment that would be caused by the project and will identify possible mitigation measures to reduce or eliminate those impacts, as appropriate. At a minimum, the EA will evaluate the potential impacts to the following resource areas:

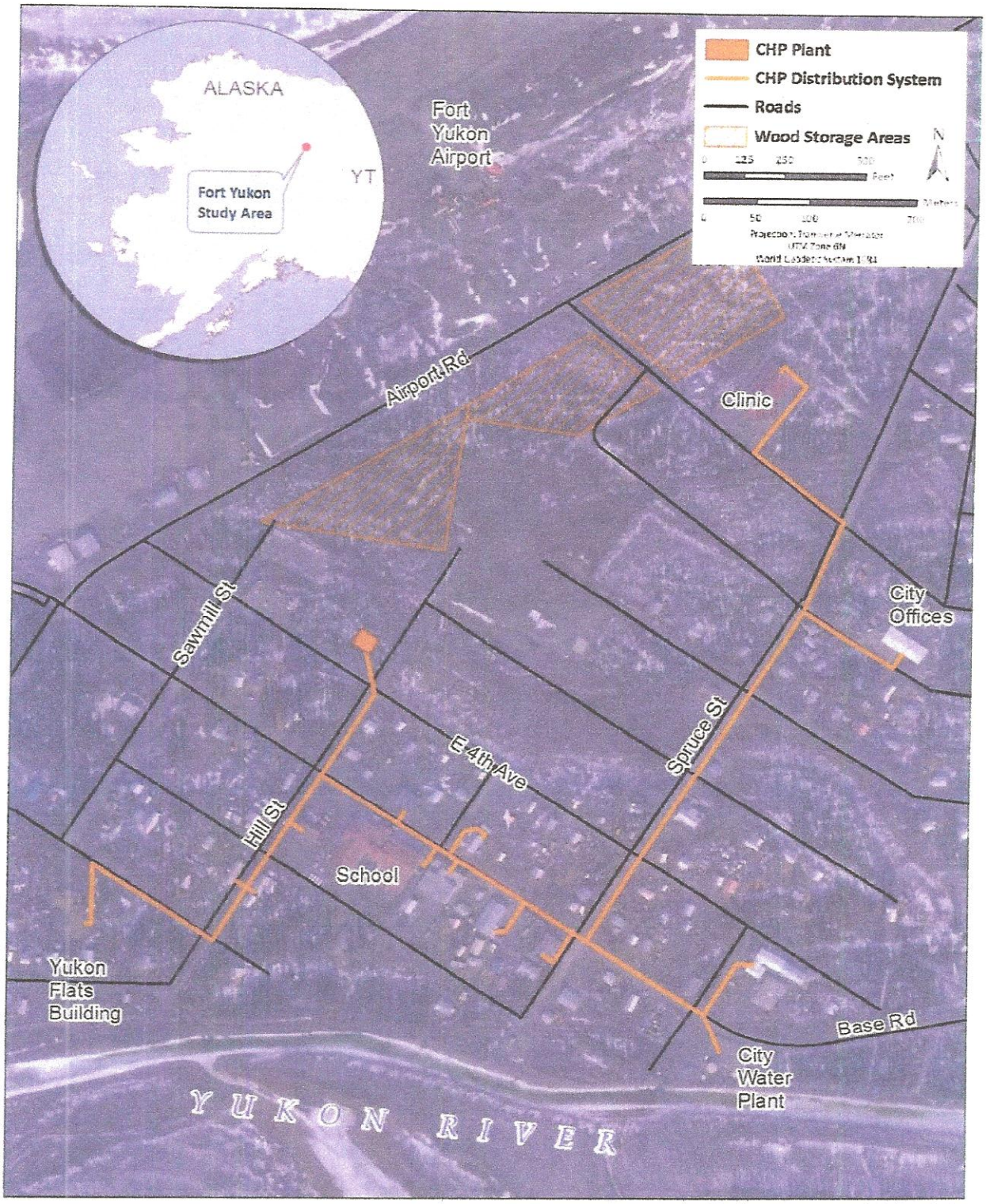

Figure 1 - CHP Plant and Distribution System

- Geology and Soil Resources
- Surface Waters, including Floodplains and Wetlands
- Biological Resources
- Cultural and Historic Resources
- Air Quality
- Noise
- Land Use
- Socioeconomics
- Environmental Justice
- Transportation
- Hazardous Materials and Waste Management
- Human Health and Safety

Proposed Floodplain and Wetlands Involvement

The proposed location of the combined heat and power plant is within the 100-year floodplain of the Yukon River, and some timber harvesting may occur within or near wetlands. Pursuant to implementing procedures for compliance with floodplain and wetland environmental review requirements (10 CFR 1022), DOE is announcing this proposed wetland and floodplain involvement; will include in the EA as necessary a floodplain and wetlands assessment; and, if appropriate, will prepare a statement of findings.

Development of a Reasonable Range of Alternatives

NEPA requires DOE to consider a reasonable range of alternatives to the proposed action during an environmental review. The definition of alternatives is governed by the "rule of reason." An EA must consider a reasonable range of options that could accomplish the agency's purpose and need and reduce environmental effects. Reasonable alternatives are those that may be feasibly carried out based on environmental, technical, and economic factors. The EA will address the No Action Alternative, in which federal funding would not be allowed for use on the proposed project. DOE assumes for the purposes of the analysis that the Fort Yukon Biomass Heating System would not proceed without that federal funding.

Public Scoping

DOE and its cooperating agencies will make this letter available to interested Native American tribal organizations and Federal, state, and local agencies so they may provide comments and information on issues to be addressed in the EA. Agencies are invited to identify the issues within their statutory responsibilities that should be considered in the EA. The general public is also invited to submit comments on the scope of the EA.

The DOE Golden Field Office and our cooperating agencies welcome your input throughout the NEPA process, but to insure that your comments are received in time for consideration in the EA, please provide comments by mail or e-mail on or before November 28, 2012 to:

Casey Strickland
NEPA Document Manager
U.S. Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401
gonepa@go.doe.gov

This letter and the draft EA, when available, will be posted to the DOE Golden Field Office online reading room at http://www.eere.energy.gov/golden/Reading_Room.aspx.

Thank you for your participation in the environmental review process.

Sincerely,

Casey Strickland

Casey Strickland
NEPA Document Manager

Attachment: Fort Yukon Combined Biomass Heating System